Community Assistantship Program

FAIM Return on Investment Project

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Analyzing the *Costs* of Assets Acquired in IDA Programs

The costs of funding the matched savings accounts known as Individual Development Accounts (IDAs) are shared between a variety of funding sources. The Minnesota state legislature provides matching funds under the Family Assets In Minnesota (FAIM) legislation. The US federal government funds IDAs nationwide under the Assets For Independence Act (AFIA). Private charitable foundations also contribute funds to Individual Development Account programs. The essence of IDAs is the individual participants' own savings as the basis for match funds received. In addition to these financial incentives to savings, IDAs require financial education classes for all participants and use substantial administrative resources to operate.

This mixture of public, private, and personal sources of funding is unlike almost any other program serving low-income families. A full understanding of the shared costs of each of the IDA programs operated by FAIM organizations would involve an analysis of all program costs, including the costs of providing matching funds, administration of the plan, and financial education. Unfortunately, the tracking of the FAIM costs for IDA program administration is necessarily incomplete. Even with complete cost data in each FAIM agency, the analysis would be subject to the cost accounting questions present in all but the simplest of organizations.

The funding sources under the FAIM used for match benefits, however, were maintained in separate intermediary accounts and disbursements were closely tracked. This data on match fund disbursements can be used to determine the number and the value of various types of assets: the costs of a house purchased, the tuition paid (or books purchased), or the value of a capital business asset acquired by participants in FAIM. Using averages, the data could then also be examined for the contribution of each of the sources of funding to each type of asset. The subject of this analysis would be the cost of the house, tuition, or capital asset as funded by personal contributions, by the state government, by the federal government, and by private donations. This analysis focuses just on the shared cost of the actual assets purchased using the IDA.

My analysis of the match funding under the FAIM has been completed as a separate document. The analysis first presents the total amounts of match funds which were disbursed during the FAIM I pilot project, by the source of those funds. It provides a graph showing the amount and percentage contributions from each of the three sources (individual savings, state match funds, and federal match funds) for the balance of an average IDA account. Next, it shows the relative disbursements of match funds for each of the three asset types. The remaining parts of the analysis were focused on the use of match funds in housing IDAs in FAIM I. One shows the average IDA balance relative to the value of the average house purchased. Another shows the average house purchase price during each year in the pilot program (from 2000 to 2004) and the average

competed housing IDA balance in each year. A final part of the analysis shows the average completed housing IDA balance, federal match funds and state match funds for each of the eight FAIM regions.

The analysis described in the prior paragraph is a simple way of demonstrating the collaborative nature of the funding of FAIM I, leveraging the contributions of participants, state, and federal sources. It uses only the available data on match funds, and thus does not require assumptions about the longer-term results/benefits of assets in the lives of participants or for the state or nation as a whole. However, analysis of the costs of providing match funds fails to capture the full long-term benefits of investing in the financial education and stability (social capital) of low-income participants and their families. These longer-term personal and social benefits of IDAs are usually presented as the primary reason for the high costs of administering IDA programs. The following section addresses several challenges to quantifying these benefits.

Challenges in Analyzing the *Benefits* of IDAs

Measuring Direct Benefits

While the costs of funding IDA programs can be obtained and directly quantified, this is (unfortunately) not true for many of the benefits of IDAs. The potential benefits of IDA programs often require information about the profitability of the asset(s) acquired through the IDA program, about the appreciation (or depreciation) in the value of the assets, or about the successful completion of a course of study and subsequent employment in higher paying job with an education IDA. Also, as the benefits of asset ownership are expected to extend over long periods (or even indefinitely), fully accounting for IDA benefits requires assumptions about asset values many years into the future.

The actual results of participation in IDA programs would be superior to assumptions regarding appreciating asset values. A number of questionable assumptions may have been used to first justify federal legislation and funding of Individual Development Accounts (see section below on Measuring Behavioral and Social Benefits). At the current time, however, IDA programs have only existed for a few years and the opportunity to study their long-term effects on participants' financial outcomes is not yet available.

Distinguishing the Effects of IDAs

An important requirement for experimental validity is that participants must have been selected by a random process. The nature of IDA programs, though, is far from conforming to this ideal. IDA programs are administered through a diverse group of social service, community action, public sector, and charitable organizations. Participants are selected from among the clients served by the organizations, or by communication with staff from other organizations. In addition to the non-random processes by which participants are identified, individual characteristics such as financial

responsibility, financial knowledge, education, family stability and other characteristics are important in the selection of participants.

Selecting participants most likely to succeed in an IDA (sometimes called the "asset-ready") is a key component of a successful IDA program, but it also prevents the generalization of results in academic settings. When participants selected are more financially literate, have more financial and family stability, and exhibit greater responsibility than low income participants overall, the effect of the IDA program itself cannot be separated from the effects of the individual's positive characteristics. Many of the more responsible, financially literate and stable low-income participants may well have achieved the goals of homeownership, higher education, or small business ownership *without* the IDA program. A statistically valid report of the effects of the IDA program would thus require a fully random selection method for participants in the plan.

The first randomized study of the benefits of IDA participation was recently published (see Benefits as Reported in Other IDA Programs). The subject of the analysis in this research was only those benefits accrued to the individual participants, however. No measures of the public sector benefits at either the state or federal level were included. Unfortunately, it is these state and federal benefits which would be the subject of a cost-benefit, return-on-assets, or other similar analysis, which was the original purpose of the research funded under this project.

Measuring Behavioral and Social Benefits

An important source of benefits under IDAs results from the behavioral changes of participants in the programs. All IDAs include required financial education classes intended in improve the personal financial literacy of participants. These classes not only teach about assets, but about more general topics intended to help participants improve the financial situation of their family. Success will lead to improved family wealth and more stability. Greater family stability will lead to a variety of positive impacts for families which will benefit not only the families themselves, but the larger society (Sherraden 1991). Some of the specific benefits which have been suggested include the reduced welfare costs, as under TANF or food stamps, higher education attainment of children raised in an owned home, and others (Clones et al. 1995). However, the behavioral assumptions included in these models, as portrayed by IDA proponents, have been largely hypothetical and have been subject to criticism from other policy researchers (DeVaan 2006). Appendix 5 is my detailed analysis and critique of the return on investments in IDAs published by CFED prior to the passage of the federal IDA funding legislation.

Choosing a Computational Form in which to Report Program Benefits

Once the question of which benefits and costs are to be included, there are several available functional formats in which the costs and benefits can be reported. These formats differ in their complexity, their origins, and the format in which the results are expressed. The most common functional format for public policy is Cost Benefit

Analysis (or Benefit-Cost Analysis). Another format which has been increasingly used in public policy analyses for social programs is a return on investment (ROI) format. The ROI format, however, lacks the precedent and legitimacy of Cost Benefit Analysis. Another format used in private investment decision-making is Break-Even Analysis (Payback Analysis). Finally, Economic Impact Analysis is widely utilized in the community economic development field to estimate effects in terms of output, business income, wages and/or jobs. Applying this form of analysis to social spending programs would be a new way of measuring such programs. Appendices 1 -4 provide a more detailed explanation of each of the functional formats, including the advantages and limitations of each.

Benefits As Reported in Other IDA Programs

The results of the first randomized study of IDA participation effects on the net worth and assets of participants was recently published (Mills et al. 2006). The study reports the results of an experiment in which applicants were either assigned to participate in an IDA program offering a 2:1 match, or were assigned to a control group in which they were forbidden to participate in any matched saving programs. The overall results showed that participation in the IDA resulted in increases in the net worth of participants, but that the increase did not meet the usual criteria for statistical significance. For those participants choosing to use the IDA to purchase a home, the modest benefits of home equity were largely offset by reduced financial assets. The authors conclude that these measures of direct benefits for the participants in IDA plans appear somewhat inconclusive as of the 48 month mark (Wave Three), but that the longer-term benefits for participants may yet prove to be significant (Mills et al. 2006).

Notice that the analysis of the Tulsa IDA using actual participant benefits have omitted any attempt to quantify the public sector benefits of the plans. There are several reasons why public sector benefits are difficult to quantify, as discussed in the Challenges of Measuring the Benefits of IDAs above. As IDA programs have come to fruition and actual experimental results become available, the models of IDA benefits are beginning to focus primarily on the measurable results for the *participants*. Unlike with the public sector benefits of the CFED model, the possible public sector benefits of IDA participation are not included in the model based on the Tulsa results.

Analyzing Public Sector Benefits under FAIM

Choosing the Level of Analysis

The Family Assets in Minnesota (FAIM) provides an opportunity to use the results from this statewide IDA program to examine the benefit and cost impacts on individual families, the state of Minnesota, the US federal government, and other private sector agents. The collaborative nature of the funding of the IDA program presents opportunities to analyze the benefits, costs, and impacts of the programs at any of several levels. The analysis of costs and benefits is generally performed at one of three levels (Boardman 2001). These levels are summarized below:

National – Including all costs and benefits to the public sector at the national level (US federal government and citizens)
State – Including all costs and benefits to the public sector at the state level (the government of the state government and local jurisdictions and state residents)
Local – Including all costs and benefits to a specific local municipality and citizens

Identifying and Estimating Benefits to be Included

Once the level of analysis has been decided, the key choices of which benefits will be included or estimated. Ideally, the full range of all possible benefits would be included in the analysis. The benefits of government-sponsored or funded projects often range from specific monetary benefits to very general social benefits. The nature of IDA programs is largely that of a social welfare expenditure (Hofer 2006), and thus many of the benefits are quite general. This is consistent with the literature of many different individual IDA program sponsors, which emphasize the positive benefits of success in an IDA on individual participants' lives and families (DeVaan and Foran 2005).

The list following the next paragraph is the types of benefits suggested by prior work on IDAs as well as the authors list of additional benefits specific to the social welfare policies in the state of Minnesota. These benefits can be organized hierarchically based on a number of different dimensions, such as the difficulty in obtaining the data or obtaining useable estimates thereof, the recipient type (private individual, state government, or federal government), or the time frame over which the benefit exists (short-, medium-, or long-term).

One dimension of IDA benefits which is particularly important is the complexity of the predictions required in order to estimate the benefit. Benefits which follow directly from a completed IDA asset purchase ("Direct") are the easiest to estimate. Benefits which require assumptions about the outcome of using the assets purchased or appreciation in the value of the asset itself would be secondary, with intermediate difficulty to estimate. Benefits which result from increases in more general economic activity (expenditures) following the purchase of the asset would be tertiary. These general economic expenditures impacts are usually modeled using economic impact models, as described in the final section of this report. Finally, benefits which are believed to result from behavioral changes fostered by successful participation in an IDA program would be behavioral benefits, which would be the most difficult to estimate.

Direct Public Benefits:

Transaction taxes on assets purchased with Individual Development Account (IDA) funds
Assessments, local and county government fees due at closing (**closing fees** and **title transfer fees**) on houses purchased in homeownership IDAs

Value-based taxes payable indefinitely on assets purchased with IDA funds
Property taxes payable on homes purchased in a home ownership IDAs

Secondary Public Benefits:

Income or profit taxes levied based on future increases in earnings or business profits

Income taxes payable on increased wages or salary resulting from education funded by education IDAs

Additional **income taxes** (personal or business) payable on profits generated by a business capitalized with funds from micro-enterprise IDAs

Assistance program cost savings when participants in IDA program exceed asset limits on means-tested benefits

Lost eligibility for **Medicaid** health insurance benefits

Lost eligibility for **TANF** welfare payments

Lost eligibility for **housing assistance**

Lost eligibility for **food stamps**

Assistance program cost savings when increased income exceeds limits on means-tested benefits

Lost eligibility for **Medicaid** health insurance benefits

Lost eligibility for **food stamps**

Increases in transaction taxes based on future increases in earnings or business profits

Increased **sales taxes** on additional consumption resulting from additional earnings

Tertiary Public Benefits:

Increased transaction taxes, income taxes or business profit taxes resulting from additional expenditures and economic activity generated by IDA asset purchases

Income taxes payable on **salaries earned by workers** and **profits earned by contractors** in the construction of a new home or major remodeling of home purchased with IDA funds

Sales taxes and tariffs on purchases of **building materials** used in construction of a new home purchased with IDA funds

Corporate profit taxes portion of homeowners **insurance premiums** paid to insurance companies for homes purchased using homeownership IDA

Income taxes payable on **salaries** earned by workers **in producing capital assets** purchased using funds from microenterprise IDAs

Corporate **profit** taxes on portion of **capital assets** purchased using funds from microenterprise IDAs

Behavioral Public Benefits:

Public assistance program cost savings believed to be avoided with behavioral changes resulting from IDA participation

Reduced demand for **law enforcement** or other **social services** resulting from increased family stability for children of participants in homeownership IDAs

Data Collection Requirements

The foregoing list of benefits to the public sector of the FAIM program contains many benefits for which the necessary data were not collected during FAIM I. Notice that even an estimate of the direct public sector benefits would require extensive data collection in order to actually measure the effects. The data required would originate from a variety of sources and at different points in time. Some of the data would be contained only in documents which are private, such as the federal and state income tax returns of participants. Others, such as property taxes paid, would be available as part of the public record. These multiple sources and various timing of data collection points would present a challenge to combining and managing data even after it would be obtained.

Example: Data Requirements to Estimate the Direct State Benefits of Housing IDAs

One of the simplest models of the public sector benefits of IDA participation would involve measuring just the direct benefits at the state level (where the state includes all local municipal governments in the state) for houses purchased using IDAs. Notice from the list above, that the model includes only two types of benefits: municipal fees paid at the time of closing on the home and local property taxes paid. The following is a list of the original sources which might be used in order to obtain the data to model the public sector benefits of a housing IDA:

Data Source	**Type**	**Data Obtained**	**Timing**
IDA statement (or MIS IDA system)	Private	State match funds, federal match funds, private match funds	Once, at completion of IDA
Closing documents	Private	Title transfer, municipal fees paid	Once, at asset purchase (closing)
Property tax records	Public	Property taxes payable, owner of record	Annually

Data Collection in the Tulsa IDA Experiment

An alternative to collecting these data from each of the original sources would be to obtain the data from the individual participants in the IDAs. Because the participants in an IDA plan would have access to all of the relevant information sources, it should be possible to obtain the necessary data from the participants as second –hand information. Although second-hand data is less reliable than data obtained from an original source, the loss in the reliability of the data might be controlled by other procedures. The surveys of participants in the Tulsa IDA project, for example, used criteria suggested by the Center for Social Development to verify responses for a particular question which fell outside of a specified range for each question or which were inconsistent with a response elsewhere

in the survey (Mills et al. 2006). The participant was contacted and requested to correct or confirm his/her response before the data was included in the results.

The Tulsa IDA experiment, as the first randomized study of the effects of IDAs on participant finances, sets one possible standard for data collection in IDA programs. The study collected information from participants in three "waves". The Wave One survey was collected at the time of enrollment/application to the IDA program. The Wave Two survey was given eighteen months after application to the IDA program. The Wave Three survey occurred 48 months after application to the IDA program. The Wave One ("baseline") survey included two parts. The first part was a list of the demographic (including marital status), education, personal finance (including income and bank account ownership), and public assistance characteristics of the participant. The second part was a list of questions about the various forms of asset ownership. The Wave Two and Wave Three surveys included only the asset ownership questions. The asset ownership questions are the same in each survey wave. The asset ownership questions which were included in the Tulsa survey were the following amount (continuous) variables: Home equity, financial assets (outside of retirement accounts), retirement account(s) balance, business equity, and net worth. The survey also asked about the ownership or lack of ownership (discrete indicator) of the following types of assets: Home ownership, business ownership, enrollment in non-degree classes, enrollment in degree-credit classes, computer purchase, retirement savings ownership, and home improvement expenditures.

Data Collection to Estimate Social Benefits

Using participant survey instruments to obtain the information necessary to estimate the public sector benefits of IDAs under the FAIM program would require an entirely different set of questions be added to the survey instrument. These questions would need to be designed to capture the types of information suggested in the list under the Analyzing the Public Sector Benefits of FAIM section above. For participants purchasing a house via the IDA, for example, the first post-asset purchase survey would need to be expanded to include information on municipal fees paid at closing. Then, questions about the amount of real estate taxes paid in subsequent years would need to be included in all following waves of surveys. Notice that the data collection requirements necessary to estimate the social benefits for education IDAs and small business IDAs would require a different set of additional questions.

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Appendix 1
Cost Benefit Analysis (CBA)/Benefit Cost Analysis

The final result is expressed as a ratio of the net present value of the benefits divided by the net present value of the costs:

BCA ratio = [net present value of benefits] / [net present value of costs]

$$= [\sum^{d}_{t=0} B_t/(1 + r_s)^t] \; / \; [\sum^{d}_{t=0} C_t/(1 + r_s)^t]$$

Format includes the following variables:

- t = Time period
- d = Duration of the CBA analysis
- B_t = Benefits accrued in period t
- C_t = Costs incurred in period t
- r_s = Social discount rate/ rate of time preference

Range of results: 0.0 to 9.9 (or more)

Criterion: Result > 1.0 indicates net social beneficial policy

Standing: May be performed at level of national public (federal government), national public and private, state public (state government), or state public and private.

Advantages:

The most widely-used format for public sector policy analysis, extensive precedent in ranging from public infrastructure investments (highways, bridges, etc), to human capital investments (employment and training, education, etc).

Particularly useful in comparing policies to alternative policies.

The CBA format includes benefits and costs during a limited period of time (the duration of the analysis), making the assumptions required in estimating benefits (and costs) simpler and less speculative than analyses with open-ended durations.

Limitations:

The benefit cost ratio may not be intuitively meaningful to policymakers or the public.

Appendix 2
Return on Investment (ROI) Analysis

The final result is expressed as an implied interest rate or return on public sector expenditures:

$$ROI = [\sum^{d}_{t=0} (B^*_t)/(1 + r)^t] / [\text{Invested Principle}]$$

Format includes the following variables:

- t = Time period
- d = Duration of the CBA analysis
- r = Rate of inflation
- B^*_t = Benefits minus return of invested capital
- g or d = Rate of decay or growth in benefits, applied either collectively or separately to each benefit

Range of results: -99% to +99% (or higher)

Criteria: ROI with positive return (>0%) indicates net social beneficial policy

Standing: May be performed at level of national public (federal government), national public and private, state public (state government), or state public and private.

Advantages:

The rate of return on investment is intuitively meaningful for comparison with interest rates and rates of return on stocks, bonds, etc.

May be used to considering a single policy; does not require alternative policies for usefulness.

Emphasizes the permanency of investment by assuming infinite time frame.

Limitations:

Public sector use appears to have been for programs where the main benefits lie in avoiding negative social expenditures, such as welfare, housing subsidies and criminal justice system costs. This "preventive social expenditure" justification is less applicable to the "asset-ready" working poor population who are the primary participants in FAIM.

Longer time frames require assumptions regarding rates of decay or growth, making the analysis very sensitive to assumptions contained in estimating the benefits and costs.

Correct application of ROI requires distinguishing between return on capital and return *of* capital, making the format unsuited for investments in which the public sector owns no physical or financial asset. ROI difficult to apply to social capital investments.

Only suitable for investments in which expenditure occurs in single lump sum at beginning of the time frame (t=0).

Appendix 3
Break-Even Analysis

The result of the analysis is expressed in terms of the number of years required to recover public sector expenditure:

Invested Principle = $\sum^{be}_{t=0} (B_t)$ (solved for t=be)

Format includes the following variables:

t = Time period (usually measured in years)

be = The time period (usually measured in years) in which sum of benefits equals invested principle

B_t = Benefits accrued in period t

Range of results: 1 to infinity

Criterion: Lower break even indicates preferred net social beneficial policy

Standing: May be performed at level of national public (federal government), national public and private, state public (state government), or state public and private.

Advantages:

May be useful in considering a single public sector policy; does not require alternative policies to be useful.

The "pay back" or break-even format emphasizes the responsibility of participants to return public sector investments.

The pay back time is intuitively meaningful to policymakers and the public.

Avoids need to distinguish between return of capital and return on capital.

Limitations:

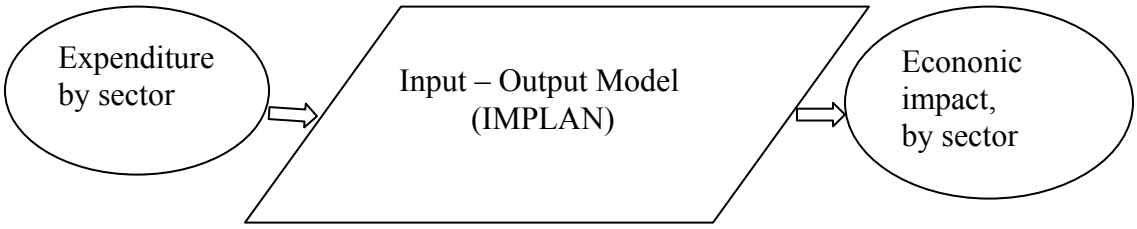
Widely used in private sector technology investment decisions, never been used in public sector policy analysis.

The bias of the format favors investments with earlier payoffs over those in which benefits are longer-term or delayed.

Only suitable for investments in which expenditure occurs in single lump sum at beginning of the time frame (t=0).

Appendix 4
Input – Output Analysis (Economic Impact)

The result of the analysis is a total economic impact measured in dollars, wages or jobs. Input-Output analysis models how additional expenditures in a particular sector of the affect all sectors of the economy. In the case of an IDA, the asset purchases would be expenditures in the construction (first home), manufacturing (small business), or services (education) sectors. Input-Output models use a complicated matrix of linear mathematical relationships between the sectors in a local economy. IO models include direct, indirect, and induced economic effects on total output, business income, personal income, wages and/or number of jobs.



Advantages:

Provides a sophisticated and comprehensive economic model widely used in local economic impact analyses.

Demonstrates broad economic impact across all sectors of the economy: Agriculture, construction, manufacturing, retail, transportation, finance, services, and government.

Requires only a few simple, clear assumptions.

Economic impact is assessed using measurements of dollars and jobs which are readily understandable and meaningful to lawmakers and the public.

Limitations:

Analysis requires access to specialized computer software such as MicroIMPLAN©.

May not capture the full long-term benefits of investing in the financial education and stability (social capital) of the low-income participants in IDAs

FAIM expenditure data may need to be mapped to the specific county of purchase, as required by MicroIMPLAN.

Appendix 5
A Critique of "The Return of the Dream: An Analysis of the Probable Economic Return on a National Investment in Individual Development Accounts"

GENERAL IDA MODEL

Assumption: *The model assumes a total match ratio of seven to one (7:1), seven dollars of match for each participant dollar contributed in the first two years of the IDA account.*

Critique: The match ratios used in this model do not conform to the actual IDA legislation, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act, which was subsequently enacted. The PRWORA specifies a maximum allowed match rate no greater than four to one (4:1). Most active IDAs offer match ratios far below the maximum. The average match ratio in the IDA programs included in the American Dream Demonstration was two to one (2:1). The IDA plans in the Family Assets in Minnesota offer a relatively generous match ratio of three to one (3:1).

Suggestion: Choose a match ratio within the range of those allowable under current IDA legislation. Use the average match ratio in the ADD or obtain a more recent estimate of the match ratios in IDAs from the annual IDA update published by CFED. [Research item] Or, use the actual match ratio in the plan (FAIM) which is the subject of the model or analysis.

Assumption: *Over half of the matching funds would come from the federal government. The remainder of funding would be split evenly between three categories: church and private organizations, state government, and local government.*

Critique: The shares of funding sources provided in the model do not appear to conform to the 1998 legislation providing the federal funding for IDAs, the Assets for Independence Act. The AFIA specifies that federal funding grants must be matched by an equal amount of non-federal funds in each IDA program. This would limit federal funding to half of all funds. Funding of any IDA program by a local government unit is rare. Most commonly, the non-federal portion of funding would be provided entirely by private sources or entirely by the state government. Although under FAIM I the funding shares are 25% private, 25% federal and 50% state sources.

Suggestion: Use the appropriate sources of funding in modeling the return on investment, ie FAIM. The outcome of any return on investment computation is particularly sensitive to the basis of the investment.

Assumption: *The costs of the administration of IDA programs, which includes all costs related to required participant education classes, are not included in the model since they are highly variable and are often included in existing programming.*

Critique: The administrative costs of IDA programs are a substantial part of overall costs. Omitting these costs because they are born entirely by sponsor organizations gives an incomplete and biased estimate of the return on investment in IDAs. IDAs have substantial administrative costs relative to other forms of federal government expenditures. These costs are driven by the high level of personal involvement with participants, which is a distinguishing feature of IDAs.

Suggestion: Administrative costs should be included in a model of return on investment. Many actual IDA plans do not appear to precisely record or report administrative costs. The AFIA legislation, however, limits all administrative costs to 15 percent of the total funding for any federally-funded IDA program. In the absence of more precise estimates of such costs, this 15 percent limit can be used to estimate administrative costs in the model.

Assumption: *The expected results are discounted by one third to allow for account holders who would have pursued the same course of action with the same results without IDAs, or who will fail in their attempt.*

Critique: The discount in the benefits for the number of participants who would have acquired the same asset in the absence of an IDA account is not based on any provided citation. No additional explanation is provided for the choice of the one third (33%) discount.

Under the PRWORA legislation, IDA participants who fail to meet their savings goal do not receive any of the match funds. Generally, these funds would remain available for other participants under the plan. Thus, it would be inaccurate to fully discount the results of the return on investment for such failures of participants to meet their savings goals.

However, the sizeable discount applied by the authors also seems to be an attempt to account for participants who do succeed in meeting their savings goals and acquire the IDA asset, but who fail with the asset thereafter. These post-asset failures would include homeowners who had to sell their homes or defaulted on their mortgages. They would also include small business owners' whose businesses failed, or failed to generate the profits predicted under the model. They would also include participants in education IDAs who dropped out of school or failed to earn a degree or who were unable to turn the education into the expected higher earnings. Each of these forms of failure, though, is quite different. The chances of default or early re-sale of a home, for example, are much lower than the chances of a small business failure. Also, because each of the three asset-types of IDAs will have its own sub-model, the timing and impact of each type of failure will be different.

Suggestion: The authors of the report incorporated a necessary reduction of the results based the realization that some participants in an IDA would have successfully pursued the same course of action in acquiring a home, starting a business, or investing in education. The nature and scope of this adjustment reflects an important philosophical debate surrounding government subsidies generally. How many IDA participants would

have been able to successfully obtain the same assets outside of an IDA is an empirical question. Unfortunately, the research literature necessary which might provide a satisfactory answer of this question remains incomplete. [Research item]

The attempt to discount the results for unmet saving goals must be redesigned to reflect the reality of the conditional nature of the match funding in IDA accounts: The only costs which are incurred when a participant prematurely withdraws her contributions are the administrative costs of the account. As an unmet savings goal in an IDA account drives somewhat higher administrative costs, it would be conservative to estimate such costs at 15% of the total *successful* account balance (including the undisbursed match funds).

Finally, the major differences between the likelihood and impact of post-asset failures mean that such failures would be better considered as part of each sub-model. Empirical estimates of the probability of mortgage defaults [Research item], business failures [Research item], and education drop-outs [Research item] should then be properly incorporated in each sub-model. This will be superior to attempting a general deduction from the overall results.

HOUSING IDAs MODEL

Assumption: *The share of IDAs used to purchase a first home will be 36 percent.*

Critique: The share of IDAs used for purchase of a new home is assumed without explanation or citation.

Suggestion: Revise this share so based on actual program experience.

Assumption: *Percentage of homes purchased in the IDA program which will be newly-constructed will be 25% of total homes purchased.*

Critique: Percentage of homes acquired in IDA programs which are newly-constructed is much less than 25% in the markets in which the IDA programs serve. IDA programs are active in depressed urban communities and rural communities in which housing stock is generally older and where new construction comprises only a fraction of home purchases.

Suggestions: Use the percentage of total homes sales in the market which are new construction. Use local, state, or national housing statistics such as those from the National Association of Realtors, or use the percentage of listed homes on real estate listing service (Multiple Listing Service) which are new construction. [Research item] In a model in which real IDA outcomes are being modeled, obtain the number of houses purchased which actually were newly constructed.

Assumption: *Each new IDA home should produce $26,214 in wages for construction, land development, manufacturing and generate $9,785 in federal taxes and $4,601 in state and local taxes.*

Critique: The amounts spent on wages, construction, and land development are *expenditures*, not a return on an investment. The figures are not specifically cited and are unrealistically large. Which specific federal taxes generate a $9,785 increase in revenue is not cited. There are no major direct federal taxes specifically levied on newly-constructed homes. The estimate of the effect on state and local taxes may reasonable, but the specific taxes comprising this amount are not given.

Suggestions: Address the issue of expenditures versus "returns" for the wages, construction, and land development. Obtain accurate statistics on the actual amounts of each specific type of tax paid to federal agencies in conjunction with new home construction. Obtain accurate statistics on the amounts of taxes paid to sample of state and local agencies on new home construction. [Research item]

Assumption: *One fourth 25% of homes purchased in the IDA program will be major remodel jobs (equal to $10,000 in remodeling costs).*

Critique: The fraction of homes which have undergone a major rehab in anticipation of re-sale is likely to be much lower than 25% of all purchased homes. Note, assuming 25% of homes were purchased new, this assumption amounts to 33% of all used homes having been major rehabilitation.

Suggestions: Obtain actual statistics on homes on the homes purchased which have undergone extensive remodeling for re-sale. Also, obtain estimates of the size of these remodel expenditures.

Assumption: *Each IDA home undergoing a major rehab for resale will generate $4,033 in additional wages, $1504 in additional federal taxes, and $706 in additional state and local taxes.*

Critique: Costs of wages in home rehabs are *expenditures*, not returns. Unclear which federal or state or local taxes, beyond sales taxes, would be generated by expenditures on rehabs for resale of home.

Suggestions: Address the issue of expenditures versus "returns" for the wages. Obtain accurate statistics on the amounts of each specific type of tax paid to federal agencies in conjunction with major rehabilitation jobs. [Research item] Obtain accurate statistics on the amounts of taxes paid to state and local agencies on major home rehabs.

Assumption: *Property taxes will average $450 for all IDA homes. This amount is return to state and local government, but cost to individual.*

Critique: Average property tax liability is underestimated by this figure.

Suggestion: Obtain more accurate estimates of property tax liabilities on houses in the state and region being analyzed. [Research item] Attempt to obtain property tax liabilities on actual home purchases in the IDA program.

Assumption: *Purchasers of homes in an IDA plan will pay an average of $400 in home owner's insurance. This amount is return to society, but cost to individual.*

Critique: The addition of $400 in homeowners insurance is an *expenditure*, not a return.

Suggestion: Address the issue of expenditures versus returns.

Assumption: *Half of IDA participants will be welfare recipients, and half of these would move off of welfare as a result of the IDA participation. Leaving welfare would create a savings of $4320 evenly split between federal and state/local governments.*

Critique: The share of IDA participants receiving welfare is likely to be far less than 50 percent. IDAs have been most successful with participants who are "asset-ready", employed and financially stable. Such participants would be very seldom receiving TANF. However, the estimate that half of welfare recipients would be induced to leave TANF may be realistic, or even conservative if participants have been identified as "asset-ready".

Suggestion: Consider more conservative estimates of the share of IDA participants receiving TANF. Use the percentage of TANF recipients relative to the total IDA eligible population. [Research item] Obtain actual data on the number of participants receiving TANF in the plan.

Assumption: *One fourth of IDA homebuyer participants will move off of federal housing support as a result of their home purchase. Federal government saves $3,920 in housing subsidies for each IDA holder who moves off of housing subsidies.*

Critique: The percentage of the total families in the IDA-eligible income categories receiving federal housing assistance is less far less than 25%. IDAs have been most successful with participants who are "asset-ready", employed and financially stable. These recipients would seem less likely to be recipients of housing assistance (except for those IDAs sponsored by public housing agencies).

Suggestion: Obtain updated statistics on the total number of recipients of federal housing subsidies as well as the total number of families in the IDA-eligible income categories. [Research item] Or, attempt to obtain information on the actual number of FAIM participants receiving housing support. Compute the percentage of housing assistance recipients as fraction of all IDA-eligible families. The current receipt of federal housing subsidies creates a larger opportunity cost for IDA recipients choosing to use the IDA to purchase a new home. It may be reasonable to conservatively estimate that very few IDA participants receiving federal housing assistance would be included in IDA home purchases.

Assumption: *The new home owners created by IDA home purchases would result in dramatically lower high school dropout rates among the children of such families. The reduction in high school drop outs would result in increased earnings equivalent to the difference between the average income of workers age 25-34 with a high school education ($17,967) minus the average income for those with less than high school education ($12,517). The additional earnings of $5450 per month would be multiplied by the number of children who would be assumed not to have dropped out of school. This number would be calculated by multiplying an average number of children per family (1.3) by the difference between the high school dropout rate for children in renters households (20%) and the high school dropout rate for children in homeowner households (8.3%).*

Critique: The flawed logic in assuming a dramatic increase in high school graduation rates between households based on homeowner status is obvious. The basic fallacy lies in the assumption of *causation* between higher high school graduation rates and homeownership status. The differences in graduation rates between the two types of households, even if accurate, presents only evidence of *association*, not causation. The connection between higher graduation rates and homeownership is likely to be caused by other variables which are not quantified in the article upon which this assumption is based. Homeowners, on average, have much greater financial resources, education, and may have more stability and supportive personal characteristics. The article cited as the basis for this section of the model is an unpublished article by Richard K Green and Michelle J White of the University of Michigan School of Economics. Less objectionable is the assumption that the difference between the incomes of each of the levels of education can be applied.

Suggestion: The extent to which we are able to assume that any improvement in high school graduation rates results from purchase of a home in an IDA should be based published research. This research should be from a peer-reviewed journal or non-partizan government agency. [Research item]

Assumption: *The market value of the purchased IDA home will appreciate at an annual rate of 3 percent.*

Critique: The rate of appreciation in the value of homes is a key assumption in the model. The rate of home appreciation has averaged much higher than 3 percent over the last several years. Recently, the rate of appreciation has slowed to below 3 percent. The appreciation in housing values often varies considerably between different housing markets; using an average or national average rate of appreciation may be misleading.

Suggestion: Use a more up-to-date and robust estimate of the appreciation in housing prices. Incorporate estimates by respected industry and economic forecasters, such as the National Association of Realtors and others. [Research item] Use regional or local home price appreciation estimates where available. Consider multiple scenarios in which different levels of home price appreciation are assumed.